

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Previously Presented) A guide wire comprising:
a first wire disposed on the distal side of said guide wire;
a second wire disposed on the proximal side from said first wire;
wherein said first wire and said second wire are joined to each other by
welding;
a welded portion formed by the welding has a projection projecting in the
outer peripheral direction;
a cover layer is disposed over said projection;
said first wire and said second wire are not helical coils;
a spiral coil covering at least a distal end portion of said first wire; and
material forming at least one of the proximal end of the first wire and the distal
end of the second wire constitutes at least a part of the projection.
2. (Canceled)
3. (Original) A guide wire according to claim 1, wherein said projection is
visible under fluoroscopy.
4. (Canceled)

5. (Previously Presented) A guide wire according to claim 1, wherein the proximal end of said coil abuts on said projection.

6. (Original) A guide wire according to claim 1, wherein the proximal side and the distal side of said projection are formed into shapes asymmetric to each other with respect to the welded surface of said welded portion.

7. (Original) A guide wire according to claim 1, wherein the vicinity of said welded portion between said first wire and said second wire, has a thinned portion, and said projection is provided on said thinned portion.

8. (Previously Presented) A guide wire comprising:
a first wire disposed on the distal side of said guide wire;
a second wire disposed on the proximal side from said first wire, said second wire having rigidity higher than that of said first wire;
wherein said first wire and said second wire are joined to each other by welding;
a welded portion formed by the welding has a projection projecting in the outer peripheral direction;
a cover layer is disposed over said projection;
said first wire and said second wire are not helical coils;
material forming at least one of the proximal end of the first wire and the distal end of the second wire constitutes at least a part of the projection;

said second wire has a first portion provided in the vicinity of the distal end of said second wire and a second portion provided on the proximal side from said first portion; and

said first portion has rigidity lower than that of said second portion.

9. (Canceled)

10. (Original) A guide wire according to claim 8, wherein said projection is visible under fluoroscopy.

11. (Original) A guide wire according to claim 8, further comprising a spiral coil covering at least a distal end portion of said first wire.

12. (Original) A guide wire according to claim 11, wherein the proximal end of said coil abuts on said projection.

13. (Original) A guide wire according to claim 8, wherein the proximal side and the distal side of said projection are formed into shapes asymmetric to each other with respect to the welded surface of said welded portion.

14. (Original) A guide wire according to claim 8, wherein the vicinity of said welded portion between said first wire and said second wire has a thinned portion, and said projection is provided on said thinned portion.

15. (Previously Presented) A guide wire comprising:

- a first wire being formed of a pseudo-elastic alloy and disposed on the distal side of said guide wire;
- a second wire being formed of a Co-based alloy and disposed on the proximal side from said first wire;
- a spiral coil covering at least a distal end portion of said first wire;
- wherein said first wire and said second wire are joined to each other by welding at a welded portion;
- the welded portion forming a projection that projects in an outer peripheral direction;
- a cover layer is disposed over said projection; and
- material forming at least one of the proximal end of the first wire and the distal end of the second wire constituting at least a part of the projection.

16. (Previously Presented) A guide wire according to Claim 1, wherein the projection extends on both axial sides of the welded portion.

17. (Previously Presented) A guide wire according to Claim 15, wherein the projection extends on both axial sides of the welded portion.

18. (Canceled)

19. (Previously Presented) A guide wire comprising:

- a first wire disposed on a distal side of said guide wire;

a second wire disposed on a proximal side from said first wire;

said first wire and said second wire are not helical coils;

said first wire and said second wire being joined to each other by welding at a welded portion;

the welded portion forming a projection on the guide wire that projects in an outer peripheral direction;

the first wire comprising a reduced outer dimension portion possessing an outer dimension smaller than the outer dimension of the projection and smaller than the outer dimension of a distally located portion of the first wire, the reduced outer dimension portion of the first wire being positioned between the projection and the distally located portion of the first wire;

the second wire comprising a reduced outer dimension portion possessing an outer dimension smaller than the outer dimension of the projection and smaller than the outer dimension of a proximally located portion of the second wire, the reduced outer dimension portion of the second wire being positioned between the projection and the proximally located portion of the second wire; and

material forming at least one of the proximal end of the first wire and the distal end of the second wire constituting at least a part of the projection.

20. (Previously Presented) The guide wire according to Claim 19, wherein said projection possesses a maximum outer that is equal to or less than an outer diameter of the distally located portion of the first wire and the proximally located portion of the second wire.

21. (Previously Presented) A method of making a guide wire comprising:

butting a connection end face at a proximal end of a first wire against a connection end face at a distal end of a second wire while applying voltage and a pressing force to weld together the first and second wires at a welded portion, the welded portion forming a projection that projects outwardly in an outer peripheral direction relative to portions of the first and second wire adjacent the projection;

adjusting an outer dimension of the projection at the welded portion so that upon completing adjusting the outer dimension of the projection the projection still projects outwardly in the outer peripheral direction relative to the portions of the first and second wire adjacent the projection.

22. (Previously Presented) The method according to Claim 21, wherein the adjusting comprises reducing a height of the projection.

23. (Previously Presented) The method according to Claim 21, wherein the adjusting comprises reducing a height of the projection to 0.001 mm - 0.3 mm.

24. (Previously Presented) The method according to Claim 21, wherein said adjusting comprises grinding the projection.

25. (New) A guide wire comprising:

a first wire disposed on a distal side of the guide wire;

a second wire disposed on a proximal side of the first wire;

the first wire and the second wire being joined to each other by welding at a welded portion;

the welded portion formed by the welding comprising a projection projecting in an outer peripheral direction, the projection including a welded surface; and

the welded surface of the welded portion being offset toward the distal side of the first wire or the proximal side of the second wire relative to a center of the projection considered with reference to an axial extent of the guide wire.

26. (New) A guide wire comprising:

a first wire disposed on a distal side of the guide wire;

a second wire disposed on a proximal side of the first wire;

the first wire and the second wire being joined to each other by welding at a welded portion;

the welded portion formed by the welding comprising a projection projecting in an outer peripheral direction, the projection including a welded surface;

the projection possessing a maximum outer-diameter portion; and

the welded surface of the welded portion being axially spaced from the maximum outer-diameter portion of the projection.

27. (New) A method of using a guide wire comprising:

introducing a guide wire into a living body, the guide wire comprising a first wire disposed on a distal side of the guide wire and a second wire disposed on a proximal side from the first wire, the first wire and the second wire being joined to

each other at a joined portion, with a projection projecting in an outer peripheral direction at the joined portion; and

advancing the guide wire in a coronary artery of the living body to position the guide wire such that the projection of the guide wire is located in a vicinity of the aortic arch.

28. (New) A method according to Claim 27, wherein the guide wire is advanced so that the projection of the guide wire is located at a distal portion of the aortic arch.

29. (New) A method according to Claim 27, wherein the first wire and the second wire are joined to one another by welding so that the joined portion is a welded portion, and the projection projects in the outer peripheral direction at the welded portion, and wherein the guide wire is advanced so that the projection of the guide wire is located at a distal portion of the aortic arch.

30. (New) A method according to Claim 27, further comprising determining an advancing state of the guide wire by viewing the projection under fluoroscopy during the advancing of the guide wire.